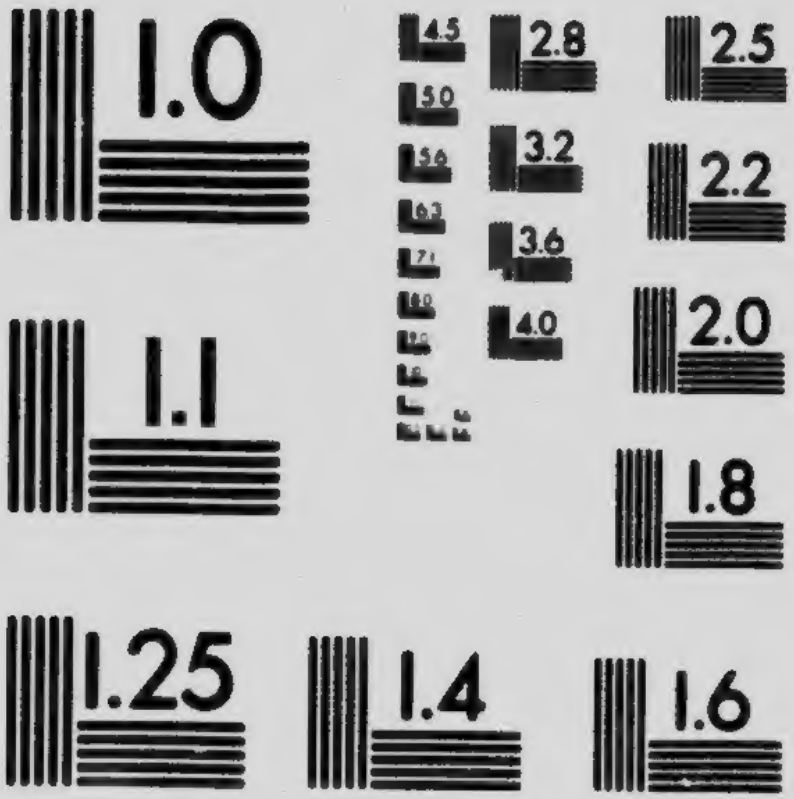

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Sir Kenelm Digby and His Powder of Sympathy

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SIR KENELM DIGBY AND HIS POWDER OF SYMPATHY.

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Of the many singular theories in the history of medicine, not the least curious is that of the Powder of Sympathy associated with the name of Sir Kenelm Digby.

Digby (1603-1665) was thoroughly educated, as education was then understood in England; was a mathematician of note and well skilled in the natural sciences. He was a man of fine presence, great stature, and bodily strength; gifted, too, with a graceful courtesy of manner and fluency of speech which won him many friends. A successful naval commander, he got his country into trouble by his too great success as a privateersman. An expert swordsman, he never hesitated to give and never refused a challenge, although by no means quarrelsome. A Royalist, he was employed by Cromwell on foreign missions, and on the Restoration was received into favor. He is most celebrated for his powder of sympathy; this was used to apply to the weapon which had caused a wound (the wound itself receiving no treatment, except to be kept cool and clean), and wondrous cures were the result. These cures were as well vouched for as the most striking cures by Christian science, faith cure, new thought, or other methods not acknowledged by the regular profession; and in many instances the proof is overwhelming.

Digby, in a formal address at Montpellier, France, in 1657 (not 1658 as the *Encyclopædia Britannica* and the *Dictionary of National Biography* have it), explained the theory of the powder. This was al-

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most at once printed in London, and twelve years afterward appeared a volume before me as I write, in which fifty-nine pages are a reprint of this address. The title page reads: "A Discourse in a Solemn Assembly at Montpellier, made in French by Sir Kenelm Digby, Knight. 1657. London. Printed for John Williams. 1669." There is a subtitle, A Discourse of the Cure of Wounds by the Powder of Sympathy.

The secret of the powder, he says, he got from a Carmelite friar, who had been in China, Persia, and the Indies, and had done many marvelous cures with it. It was simply powdered "vitriol," i. e., impure iron or copper sulphate.[1]

The theory, Digby bases on seven propositions:

1. The whole air is filled with light, and he says he can prove that light is a material and corporeal substance—Sir Isaac Newton's "corpuscular theory," which did not receive its quietus till a century and a half after Digby's time.

2. The light when it strikes any body makes some small incisions, and, separating small atoms from the body, carries them away with it when reflected. This is the real basis of the whole theory, and it is demonstrably false.

3. The air is therefore full of small bodies or atoms—this is not far from the truth, but not from the reason Digby assigns.

4. Every body, however small, is divisible *ad infinitum*. This is pretty much the basis of our atomic theory and the theory of molecules, and, within moderately wide limits, is true.

5. Small bodies or atoms are "drawn aside," i. e., attracted "to a road altogether differing from that which their universal causes should make them hold." Leaving aside the metaphysics, this means that they are subject to attraction, which is undoubtedly true. The examples given show the state of physics at the time. Magnetic and electric attrac-

[1]The reaction when a sword was immersed in a solution of the powder, indicates that it was copper sulphate, "blue vitriol."

tion are well enough; but when our author instances sucking and the siphon as cases of attraction, rather than of *vis a tergo,* he is far astray. The state of medical science, too, is illustrated by some of the examples of "drawing" which are given at this stage: "'Tis upon this foundation that Physicians ordain the application of Pigeons or Puppy's or some other hot Animals to the soles of the feet, or the hand wrists or the stomachs or the navils of their Patients, to extract out of their bodies the wind or ill vapours which infect them."

The celebrated Doctor Sydenham (whom his biographer accuses of "having obtained a medical degree with little or no knowledge of medicine") about this time in cases of the "iliac passion" (volvulus) was accustomed to "order a live kitling to be always upon the naked belly"; and the still more celebrated John Wesley, three quarters of a century later, recommended to "hold a live puppy constantly on the belly." I ventured to suggest that this treatment might be quite reasonable as supplying a steady heat, at the same time giving the patient something to think of beside his abdomen;[2] but the theory was quite different.

Digby then gives the case of a nun (reported by Petrus Servius, physician to Pope Urban VIII), who by excessive fasting, etc., had so wasted her body that she seemed all one fire. This heat drew into her body the air; the air got into that part where there is the most "serosity," i. e., the bladder. There the air was rendered into water "among her urine" in an incredible quantity, and she for some weeks voided more than 200 pounds of water every twenty-four hours. Twenty gallons a day was not bad; but the extraordinary features of the story are the ideas that fire or heat could draw air, that air could be transformed into water, and that, by the bladder. Of course Malpighi had not yet published his immortal discoveries as to "glands."

[2]Wesley's System of Medicine, NEW YORK MEDICAL JOURNAL, January 10, 1914.

6. The sixth principle follows. When fire or heat draws air, and the air has in it any atom of the same nature as the drawing body, such atoms are more powerfully attracted than if they were of a different substance; and "they stay, stick, and mingle more willingly with the body which draws them," because of "their Resemblance and Sympathy they have one with the other." The loves and hates of the different forms of matter were a constant study and a constant puzzle to the alchemists; they could not understand why water should refuse to unite with olive oil and yet eagerly unite with oil of vitriol. The pseudoscience of Digby was equally helpless but greatly daring. Crystallization he makes an effect of "resemblance of figure." "Ordinary salt forms itself alwaies in cubes of four square faces; salt-peter in forms of six faces; Ammoniac-salt in Hexagons, as the Snow doth, which is sexangular. Whereto Mr. Davison attributes the pentagonary form of every-one of those stones which were found in the bladder of Monsir Peltier to the number of fourscore." When one has burned his hand, it is an ordinary thing to hold the hand near the fire—the ignited atoms of the fire and of the hand draw one another, "the fire being the stronger, has the mastery and draws out the fire of the hand, which is thereby eased." "'Tis an usual course though a nasty one of those who have ill breaths to hold their mouths open over the Privy as long as they can; and by the reiteration of this remedy they find themselves cured at last, the greater stink of the Privy drawing to it and carrying away the lesse, which is that of the mouth." On the same principle the head of a viper or scorpion is placed over a wound caused by its bite; the humble and inoffensive toad (as it is now known to be) was then supposed to be full of poison; accordingly "The Farcy is a venemous and contagious humour within the body of a Horse: hang a toad about the neck of the Horse in a little bag and he will be cured infallibly: the Toad which is the stronger poyson drawing to it the venome

which was within the Horse." Wine in the cellars makes a kind of fermentation when the vines are in flower, and a table cloth "spoted with Mulberries or red Wine is easily whitened again at the Season that the Plants flower." This forms an easy explanation of moles and birthmarks generally, as well as of the contagiousness of yawning.[3]

Digby gives the original theory of a custom, not yet extinct, vicious in essence and not seldom of evil consequence: "Where there are great dogs or Mastifs, if any be bitten by them, they comonly use to be kil'd, though they be not mad, for fear lest the leven of the canine choler which remains within the body bitten might draw to it the malignant spirits of the same dog should he afterwards chance to be mad."[4]

He is not quite sure of the alleged fact that artificial noses made of the flesh of other men putrefy as soon as these other men die. In this he is more skeptical than Van Helmont, who tells the story of Gaspard Tagliacozzi (Latinized, Taliacotius), an Italian surgeon and professor of anatomy and surgery at Bologna, Italy, where he died in 1599. While not the originator of autoplasty, he was quite the most renowned practitioner in the operation for restoring lost noses, ears, etc.—called after him the "Taliacotian operation."

"A certain inhabitant of Bruxels, who in a combat had his nose mowed off, addressed himself to Tagliacozzius, a famous chirurgeon living at Bononia

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[3]An example, "interesting if true," of attraction is here given, after speaking of "the notable affinity betwixt Gold and Quicksilver," so that "if Gold but touches Mercury, that sticks close to it and whitens it so that it scarce appears Gold but *silver* only," the author says. "Take then a spoonful of Mercury . . . and finger it with one hand; if you have a Gold ring on the other it will become white and covered with Mercury. . . . Moreover, if you take a leaf or a Crown of Gold in your mouth and put but one of your toes in a Vessel where Mercury is, the Gold in your mouth, though you shut your lips never so close, shall turn white and laden with Mercury." Of course, these statements are absurdly and demonstrably false, as was so much of the "natural philosophy" of Digby's day and long after.

[4]I omit Digby's cure for warts; it seems to me distinctly inferior to the early Missouri method of which Mark Twain tells, i. e., using "spunk-water," "tering at the same time the cabalistic incantation:

"Barley-corn, barley-corn, Injun meal shorts,
Spunk-water, spunk-water, swaller them warts."

(Bologna, Italy), that he might procure a new one; and when he feared the incision of his own arm, he hired a Porter to admit it, out of whose arm, having first given the reward agreed on, at length he dig'd a new nose. About thirteen months after his return to his own country, in a sudden the ingrafted nose grew cold, putrified, and within a few days dropt off. To those of his friends that were curious in the explanation of the cause of this unexpected misfortune, it was discovered that the Porter expired, neer about the same punctilio of time wherein the nose grew frigid and cadaverous. There are at Bruxels yet surviving some of good repute, that were eye witnesses of these occurrences."

Samuel Butler gives this in a poetic form, but with the facts (?) a little different:

> So learned Taliacotius from
> The brawny part of porter's bum
> Cut supplemental noses which
> Would last as long as parent breech;
> But when the date of Nock was out
> Off drop'd the sympathetic snout.
>
> *Hudibras,* Canto I, 281-286.

Every one knows the amusing story on the same theme by Edmond About, *Le nez d'un notaire.*[5]

7. The source of those atoms not only attracts them to itself but also all that accompanies, sticks to or is united with them.

This explains the common custom of throwing salt on the cinders when milk has boiled over. When the milk is burning, the cow's udder whence it came attracts the atoms of the milk and the accompanying fire; unless some precaution is taken, the udder will become hard and ulcerated, the cow will suffer from hematuria (Digby uses plain Saxon terms), and she will be in danger to die. Now, salt is "of a nature clean contrary to fire, the one being hot and volatil, the other cold and fixed, in so much that where they use to encounter, the salt, as it were, knocks down the fire"—and there you are.

[5]See A Seventeenth Century Surgeon and His Fee, New York Medical Journal, March 2, 1912.

So both in France and England, physicians in selecting a foster mother, test her milk by tasting, smelling, etc., but no experienced wet nurse will allow them to boil it—"but those of whose milk this experiment hath been made have felt themselves so tormented in their Paps, while their milk was a-boiling, that having once endured this pain they would never consent" again to this test.

In like manner take the excrement of a dog and throw it into the fire; he becomes heated and moved, panting and sticking out his tongue. If the experiment is too often repeated, the dog, "not being able to take any nourishment, his flancks cling together and he dies." Digby warns his hearers not to divulge this to persons likely to use the knowledge to do mischief, as the same result would follow in the case of men.

Van Helmont has the same example (*A Ternary of Paradoxes of the Magnetic Cure of Wounds, Nativity of Tartar in Wine, Image of God in Man,* Written originally by Job. Bapt. Van Helmont and Translated, Illustrated and Ampliated by Walter Charleton, Doctor in Physick and Physician to the late King: London: 1650). This is what he says: "Hath anyone with his excrements defiled the threshold of thy door and thou intendest to prohibit that nastiness for the future, do but lay a red hot iron upon the excrement and the immodest sloven shall in a very short space grow scabby in his buttocks: the fire torrifying the excrement and by dorsal magnetism driving the acrimony of the burning into his impudent anus."

Digby gives a concrete case of the child of a neighbor in England: he had a burning fever, was inflamed all over, "strove to go to stool, but could do little and that little covered with blood; he refused the breast," and his parents were most anxious. Digby found that the nurse was in the habit of throwing the child's feces into the fire, and the mystery was solved; because he knew of a like case a few years before in the case of "a child of

one of the most illustrious Magistrates of the Parliament of Paris." The appropriate treatment was obvious; the excrements were "put into a bason of cold water and set in a cool place." The inevitable result followed; "the child began to amend the very same hour and within four or five daies became perfectly well recover'd."

Overfat cattle whose hoof has swollen and has a putrefied core are cured on the same prineiple. Put a turf upon which some of the corrupt matter from the hoof has been pressed out, "exposed in some proper place to receive the dry cold blasts of the northern wind," and the trick is done and a cure effected.

Now comes the complete theory of the operation of the sympathetic powder: "Vitriol is composed of two parts, the one fixed, the other volatil; the fixed, which is the salt, is sharp and biting and caustique in some degree; the volatil is smooth, soft, balsamical and astringent . . . they who well know how to draw the sweet oyl of Vitriol, which is the pure volatil part thereof, know also that in the whole closet of Nature there is no balm like oyl." Easy, Sir Kenelm!

Now take some vitriol (Vitriol of Rome or Cyprus preferred, and some add Gum of Tragacanth), dissolve it in fountain, or better, rain water; into this water "put a clowt or rag embrued with the blood of the party" if the rag was dry; "if the rag was still wet and moist with the reaking blood, there was no need but to sprinkle it with the powder of the same vitriol." Keep the rag in a cool place, renewing the water or the powder from time to time. The explanation is simplicity itself, granting Sir Kenelm his premises. The light strikes the vitriol and the blood, tears off atoms of both, the wound attracts the atoms of blood and with them the atoms of vitriol, "the spirits of the vitriol which is of a balsamical virtue," enters the wound and it "thereby is immediately refresht and eas'd." The same cure is effected "by applying the remedy to the

Blade of a Sword which has wounded a body, so the sword be not too much heated by the fire."

Any one can easily see that "in this Sympathetical Cure there is no need to admit of an action distant from the Patient," for there is "a real communication 'twixt the one and the other., viz., of a Balsamical substance which corporally mingles with the wound . . . *Nec Deus intersit, nisi dignus vindice nodus inciderit.*" Here Digby definitely parts company with Van Helmont and his kind, who all insisted on action of one body upon another at a distance and in whose theory God was constantly appearing—the *Deus ex machina* always in evidence.

The very great comparative success of the sympathetic powder will excite no astonishment with those who know the villainous treatment *secundum artem* of the regular surgeons of the time.

With a belief not dead till Lister killed it, and in full vigor in my day as a medical student, that pus was a good thing in itself, so long as it was "laudable pus" and not too abundant, the faculty of the seventeenth century used every effort to bring it forth—and many times, indeed, thought it sufficient to cure the wound if the surgeon had the skill or good fortune to excite a sufficient quantity of this laudable which some therefore called also healthy and benign pus; so the surgeons applied a "digestive." But they were not content to rely upon the pus-exciting medicament alone, but often applied a most celebrated vulnerary balsam which was approved by Paulus Barbette, an acknowledged master of the art of surgery—and this balsam was composed of many ingredients, turpentine, gum galbani, gum elemi and hederæ, frankincense, gum mastich, myrrh, aloes, galingal, cloves, cinnamon, nutmeg, and cubebs. And this ointment was considered both "digestive, sarcotic, and epulotic"—for the turpentine, gum elemi, frankincense, and mastich are digestive, the gum galbani, gum elemi, myrrh, aloes, cloves, and nutmeg were thought sarcotic, and aloes, myrrh, and mastich to be also epulotic.

This foul mess applied to the wound, the surgeons firmly believed had much virtue; but the result of such an application can be contemplated only with a shudder by one trained in the ultracleanly methods of modern surgery. In Digby's method there was no topical application to the wound; all that was done to it, was to wash it carefully from time to time with fair clean water, cover it with a clean, soft linen cloth, and cleanse it once a day from pus and other impurities—the purer the water, the cleaner the cloth, the better. And the beneficial result which Digby referred to the vitriol followed from *vis medicatrix Naturæ*, old Dame Nature's own remedy.

Osgoode Hall.